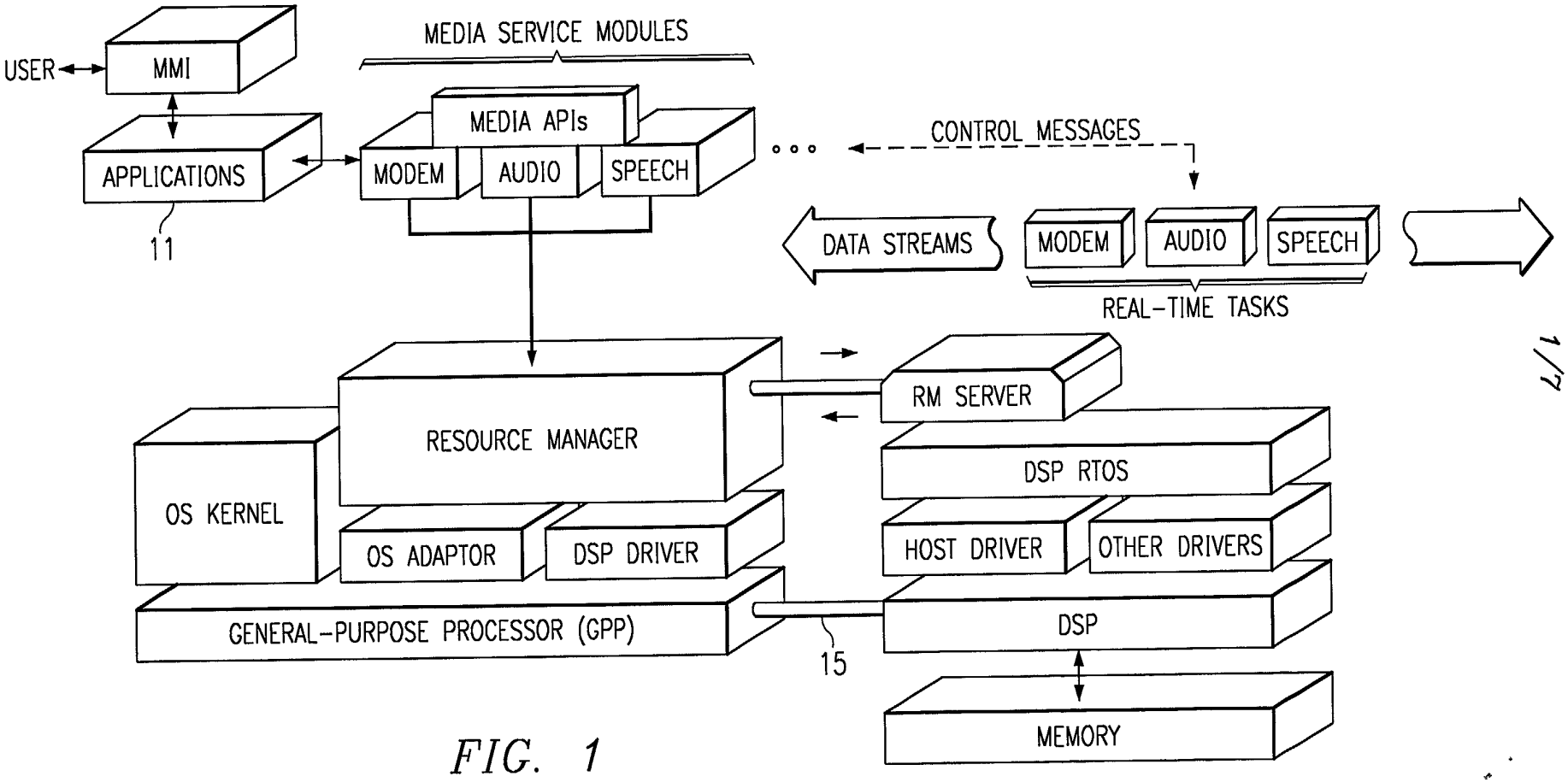

USER
MMI
APPLICATIONS
11
MEDIA SERVICE MODULES
MEDIA APIs
MODEM
AUDIO
SPEECH
CONTROL MESSAGES
DATA STREAMS
MODEM
AUDIO
SPEECH
REAL-TIME TASKS
RM SERVER
RESOURCE MANAGER
OS KERNEL
OS ADAPTOR
DSP DRIVER
DSP RTOS
HOST DRIVER
OTHER DRIVERS
GENERAL-PURPOSE PROCESSOR (GPP)
15
DSP
MEMORY

*FIG. 1*

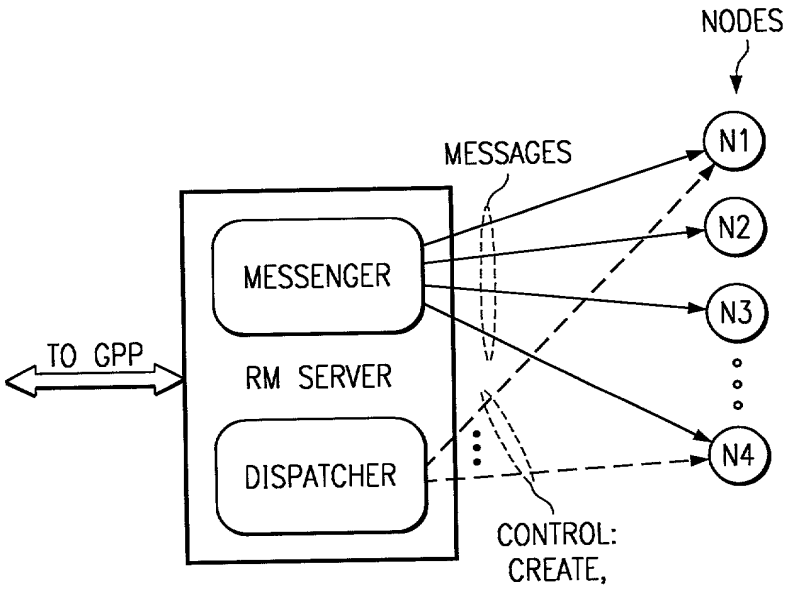
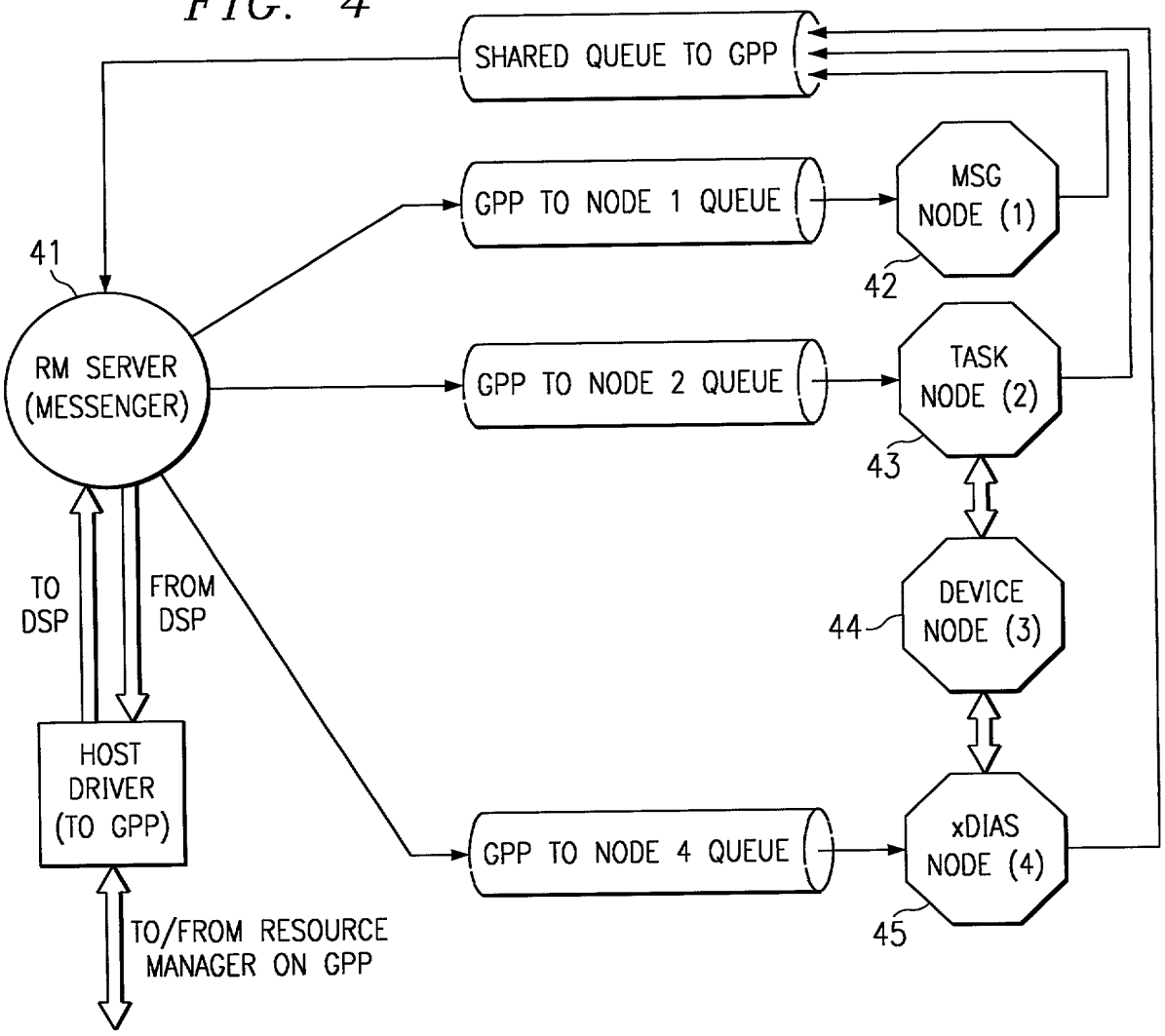



*FIG. 2*

| SERVER FUNCTION | PURPOSE |
|---|---|
| RMS_queryServer | ALLOW GPP TO QUERY SERVER INFORMATION |
| RMS_configureServer | ALLOW GPP TO SET SERVER CONFIGURATION PARAMETERS |
| RMS_createNode | CREATE A MESSAGE, TASK, OR xDAIS SOCKET NODE |
| RMS_executeNode | LAUNCH A NODE INTO ITS EXECUTE PHASE |
| RMS_deleteNode | DELETE A NODE'S RESOURCES |
| RMS_changeNodePriority | CHANGE EXECUTION PRIORITY OF A NODE |
| RMS_readMemory | READ A WORD OF DSP MEMORY |
| RMS_writeMemory | WRITE A BLOCK OF DSP MEMORY |

*FIG. 3*

FIG. 4


SHARED QUEUE TO GPP
GPP TO NODE 1 QUEUE
MSG NODE (1)
42
41
RM SERVER (MESSENGER)
GPP TO NODE 2 QUEUE
TASK NODE (2)
43
DEVICE NODE (3)
44
TO DSP
FROM DSP
HOST DRIVER (TO GPP)
GPP TO NODE 4 QUEUE
xDIAS NODE (4)
45
TO/FROM RESOURCE MANAGER ON GPP

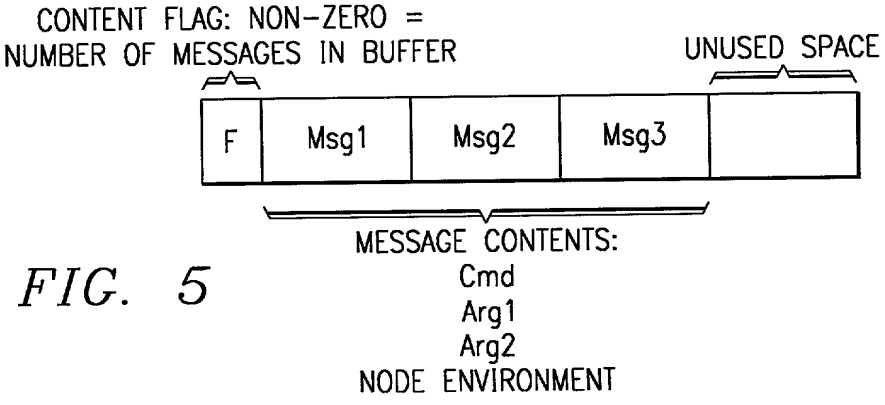

CONTENT FLAG: NON-ZERO = NUMBER OF MESSAGES IN BUFFER
UNUSED SPACE
F
Msg1
Msg2
Msg3
MESSAGE CONTENTS:
Cmd
Arg1
Arg2
NODE ENVIRONMENT

FIG. 5

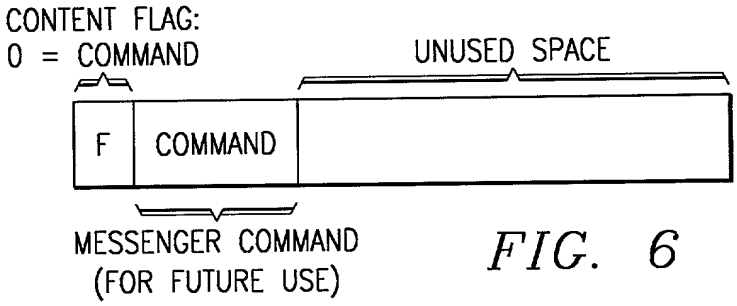



FIG. 6

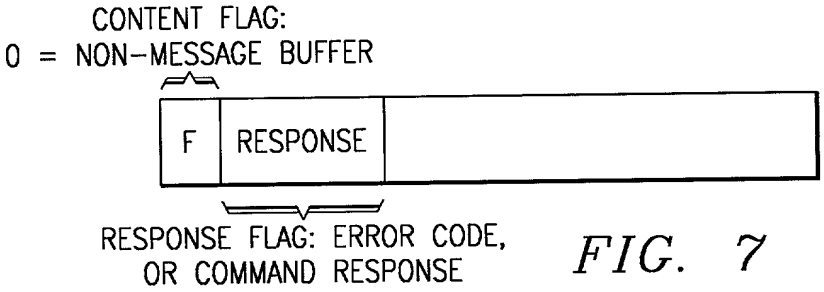



FIG. 7

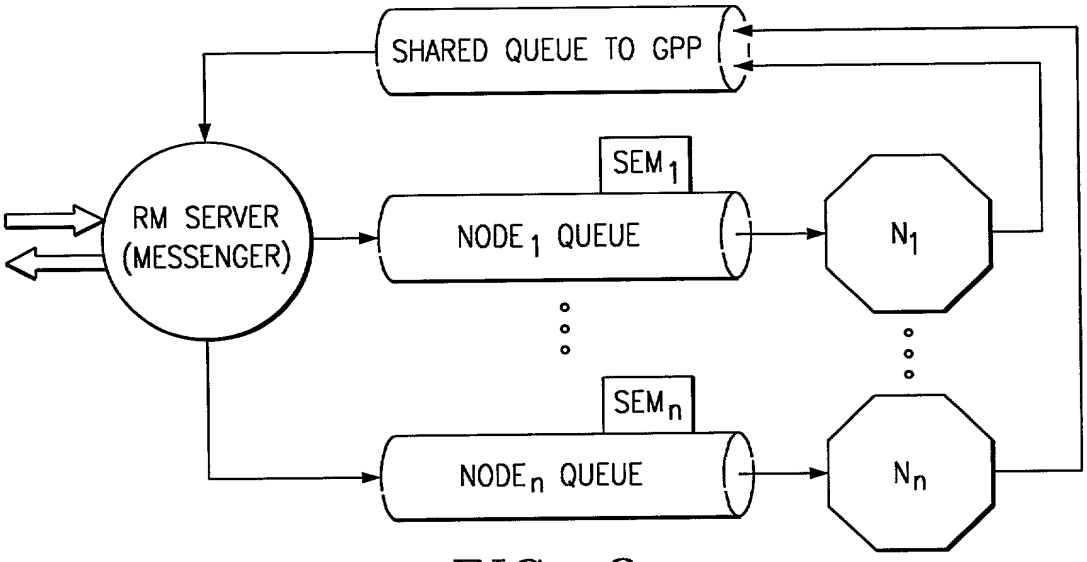



FIG. 8

FIG. 9

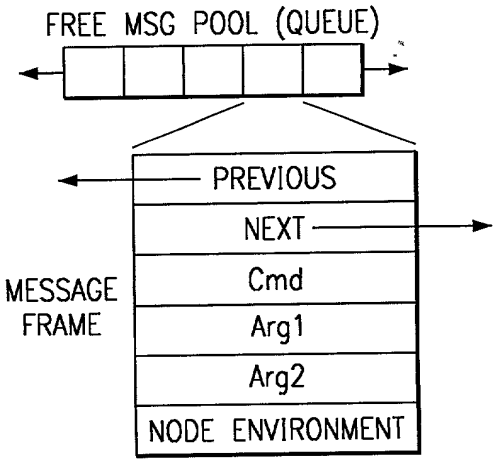
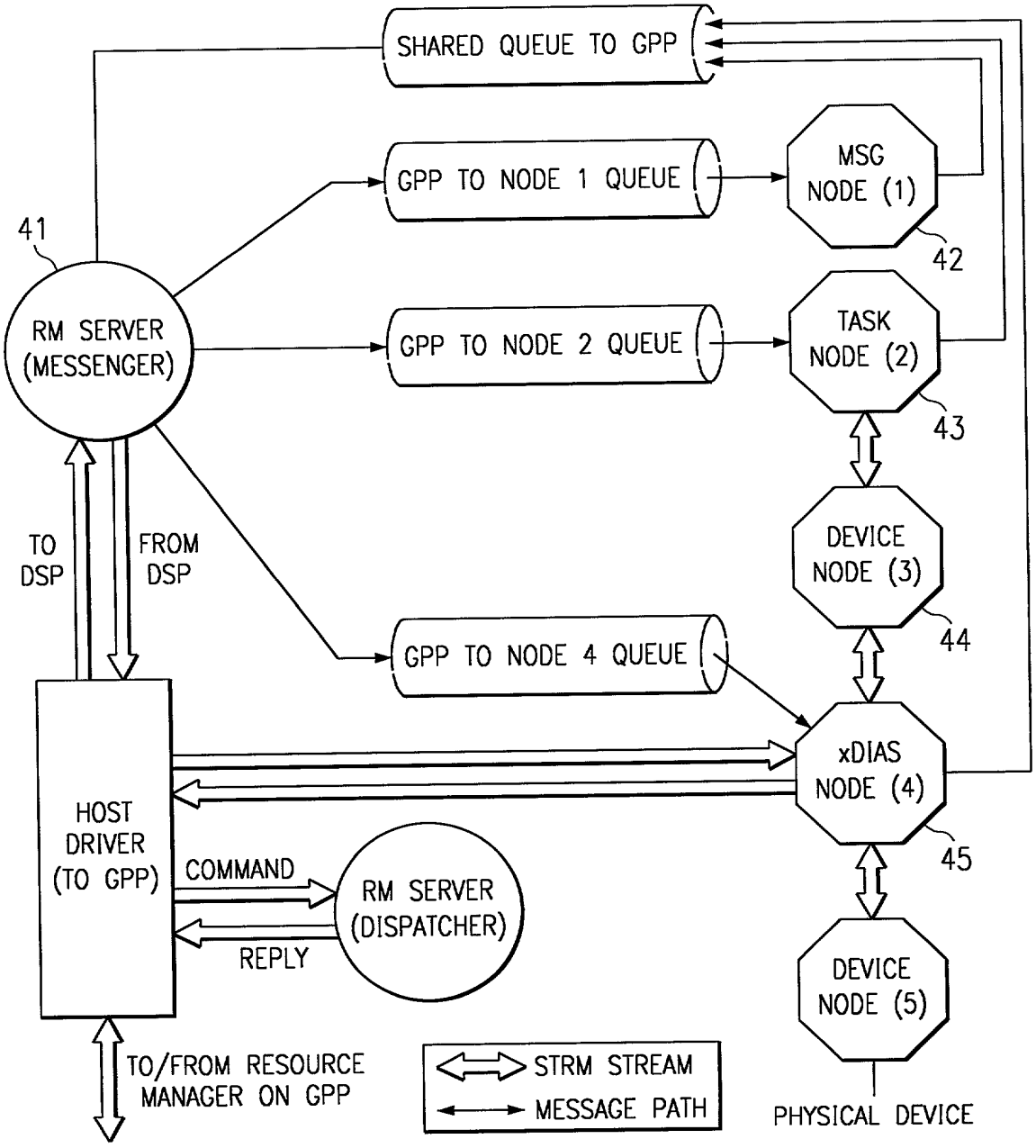

FREE MSG POOL (QUEUE)
PREVIOUS
NEXT
MESSAGE FRAME
Cmd
Arg1
Arg2
NODE ENVIRONMENT

FIG. 10


SHARED QUEUE TO GPP
GPP TO NODE 1 QUEUE
MSG NODE (1)
42
41
RM SERVER (MESSENGER)
GPP TO NODE 2 QUEUE
TASK NODE (2)
43
DEVICE NODE (3)
44
TO DSP
FROM DSP
GPP TO NODE 4 QUEUE
xDIAS NODE (4)
45
HOST DRIVER (TO GPP)
COMMAND
REPLY
RM SERVER (DISPATCHER)
DEVICE NODE (5)
TO/FROM RESOURCE MANAGER ON GPP
STRM STREAM
MESSAGE PATH
PHYSICAL DEVICE

| COMMAND FIELD (32-BITS) | CONTENTS |
|---|---|
| fxn | ADDRESS OF SERVER FUNCTION TO EXECUTE |
| arg1 | SERVER FUNCTION ARGUMENT 1 |
| arg2 | SERVER FUNCTION ARGUMENT 2 |
| data[] | FUNCTION-SPECIFIC DATA ARRAY |

*FIG. 11*

| REPLY FIELD (32-BITS) | CONTENTS |
|---|---|
| RESULT | NODE OR SERVER FUNCTION RETURN CODE |
| arg1 | COMMAND-SPECIFIC RETURN ARGUMENT 1 |
| arg2 | COMMAND-SPECIFIC RETURN ARGUMENT 2 |

*FIG. 12*

| SERVER FUNCTION | RESULT | arg1 | arg2 |
|---|---|---|---|
| RMS_queryServer | QUERIED VALUE | – | – |
| RMS_configureServer | SUCCESS/FAIL RETURN CODE | – | – |
| RMS_createNode | nodeCreate RETURN CODE | NODE ENVIRONMENT PTR | – |
| RMS_executeNode | nodeExecute RETURN CODE, OR COMMAND ACK | – | – |
| RMS_deleteNode | nodeDelete RETURN CODE | – | – |
| RMS_changeNodePriority | SUCCESS/FAIL RETURN CODE | – | – |
| RMS_readMemory | MEMORY CONTENTS | – | – |
| RMS_writeMemory | SUCCESS/FAIL RETURN CODE | – | – |

*FIG. 13*

FIG. 14

| RETURN CODE | ENUMERATED VALUE | MEANING |
|---|---|---|
| RMS_EOK | 0 | OK, NO ERROR |
| RMS_EOUTOFMEMORY | 1 | MEMORY ALLOCATION FAILURE |
| RMS_EMEMFREE | 2 | MEMORY DE-ALLOCATION FAILURE |
| RMS_EOUTOFIO | 3 | I/O ALLOCATION FAILURE |
| RMS_EIOFREE | 4 | I/O DE-ALLOCATION FAILURE |
| RMS_ERESOURCE | 5 | A RESOURCE WAS UNAVAILABLE |
| RMS_ENOTFOUND | 6 | SYMBOL OR MODULE NOT FOUND |

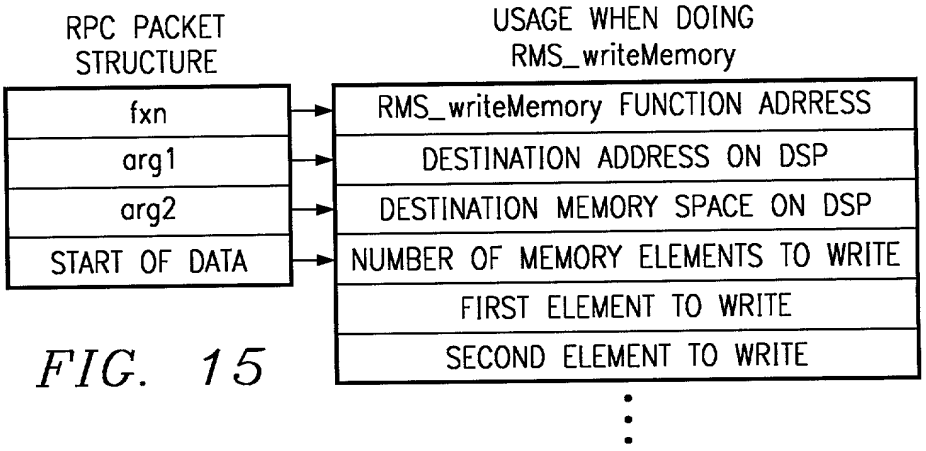



FIG. 15

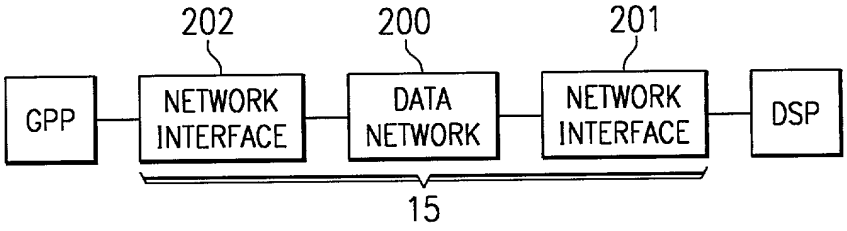



FIG. 16

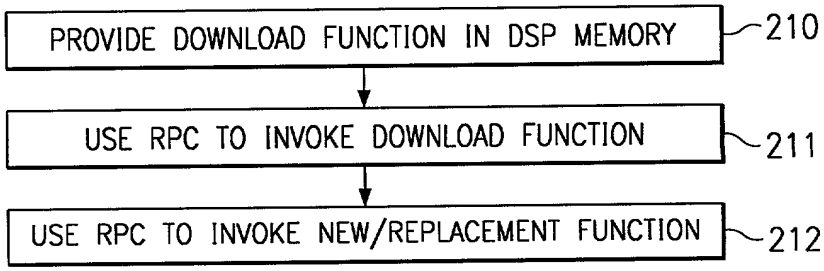



FIG. 17